



Horticultural
Development
Company

New Project

HNS 175

Liverwort control in HONS
using novel techniques

Project Number: HNS 175

Title: Liverwort control in HONS using novel techniques

Start and end dates: 1 April 2009 to 31 March 2012

Project Leader: Dr Jill England, ADAS

Project Co-ordinator: John Richards (John Richards Nurseries) & Dr Neal Wright (MPS)

Location: Oakover Nursery, Ashford, Kent & Palmstead Nursery, Wye, Kent

Background and project objectives

Liverwort growing on the surface of container plant growing media is a major problem to the horticultural industry, affecting both protected and outdoor grown hardy nursery stock; their removal has been estimated to equate to 4% of total annual production costs (£13 million). Zero tolerance of liverwort in certification schemes and a lack of approved chemical products make its control a technical priority for growers. This aim of this project is to build on work done in HDC projects HNS 126 & HNS 93c which established that *Marchantia polymorpha* is the key liverwort species implicated in infestations, and that unknown biological or physical factors within certain growing media may be suppressing liverwort growth. The proposed work will investigate the possibility of liverwort control using glucosinolate (GSL) hydrolysis products, and further investigate possible suppressive factor(s) in growing media to develop a practical method of control and thus improve advice for growers. The specific objectives are:

1. To investigate the use of brassica seed meal products (containing glucosinolates) to control liverwort when applied as a mulch and incorporated into growing media, identifying the most effective product, determining effective application rates and identifying any adverse effects on crop growth and quality.
2. To investigate the suppressive effect of growing media amendments on liverwort establishment and growth, determining effective incorporation rates, identifying any adverse effects of these amendments on crop growth and quality, and identifying products that could be used commercially.
3. A simple cost-benefit analysis will be done to determine if liverwort control using such products would be cost effective.

It is proposed that the project is completed in three Phases, with Phases 2 and 3 dependent on the outcome of Phases 1 and 2 respectively, and each subject to an annual review and panel approval.

Further information

Email the HDC office (hdc@hdc.org.uk), quoting your HDC number, alternatively contact the HDC at the address below.

Horticultural Development Company
Tithe Barn
Bradbourne House
East Malling
Kent
ME19 6DZ

Tel: 01732 848 383

Fax: 01732 848 498

The contents of this publication are strictly private to HDC members. No part of this publication may be copied or reproduced in any form or by any means without prior written permission of the Horticultural Development Company.